COURSE OUTLINE "MECHANISMS OF CARCINOGENESIS"

1. GENERAL

SCHOOL	HEALTH SCIENCES			
DEPARTMENT	MOLECULAR BIOLOGY AND GENETICS			
LEVEL OF STUDIES	ISCED LEVEL 6			
COURSE CODE	**MBG323**	**SEMESTER**	6th	
COURSE TITLE	MECHANISMS OF CARCINOGENESIS			
TEACHING ACTIVITIES *If the ECTS Credits are distributed in distinct parts of the course e.g. lectures, labs etc. If the ECTS Credits are awarded to the whole course, then please indicate the teaching hours per week and the corresponding ECTS Credits.*			**HOURS/WEEK**	**ECTS CREDITS**
			3	4
COURSE TYPE *Background, General Knowledge, Scientific Area, Skill Development*	SCIENTIFIC AREA			
PREREQUISITES:	NO			
TEACHING & EXAMINATION LANGUAGE:	GREEK			
COURSE OFFERED TO ERASMUS STUDENTS:	NO			
COURSE URL:	https://eclass.duth.gr/courses/418348/			

2. LEARNING OUTCOMES

Learning Outcomes

Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.

Upon successful completion of the course, the students will:

- Learn and understand the molecular mechanisms and basic principles of carcinogenesis.
- Learn the basic principles of molecular diagnosis of cancer.
- Learn the main therapeutic strategies and approaches in cancer.
- Be familiar with the complex scientific terminology related to cancer.
- Develop critical thinking and understanding and become familiar with how scientific research in cancer is designed.
- Develop the ability to evaluate research activities and experimental protocols related to cancer.

General Skills

Name the desirable general skills upon successful completion of the module

Search, analysis and synthesis of data and information,
ICT Use
Adaptation to new situations
Decision making
Autonomous work
Teamwork
Working in an international environment
Working in an interdisciplinary environment
Production of new research ideas
Project design and management
Equity and Inclusion
Respect for the natural environment
Sustainability
Demonstration of social, professional and moral responsibility and sensitivity to gender issues
Critical thinking
Promoting free, creative and inductive reasoning

- Research, analysis and synthesize of data and information
- Production of new research ideas
- Promotion of free, creative and inductive thinking

3. COURSE CONTENT

- Introduction
- Cancer epidemiology
- DNA and RNA tumor viruses

- Cellular Oncogenes
- Tumor Suppressor Genes
- Cell Cycle deregulation and Cancer
- The role of p53 in cancer progression and therapy
- The genetic contribution to cancer - Familial and sporadic cancer
- Genomic instability and epigenetic dysregulation in cancer
- Molecular diagnostics in cancer (I)
- Molecular diagnostics in cancer (II)
- Molecular approaches to cancer therapy (I)
- Molecular approaches to cancer therapy (II)

4. LEARNING & TEACHING METHODS - EVALUATION

TEACHING METHOD *Face to face, Distance learning, etc.*	Face to face
USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) *Use of ICT in Teaching, in Laboratory Education, in Communication with students*	Use of ICT in teaching Use of ICT in communication with students
TEACHING ORGANIZATION *The ways and methods of teaching are described in detail.* *Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliographic research & analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning, Study visits, Study / creation, project, creation, project. Etc.* *The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.*	

Activity	***Workload/semester***
Lectures	40
Study at home, bibliographic research & analysis	80
Course Total	**120**

STUDENT EVALUATION *Description of the evaluation process* *Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay / Report, Oral Exam, Presentation in audience, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others* *Please indicate all relevant information about the course assessment and how students are informed*	**Student evaluation languages** Greek, English **Method (Formative or Concluding)** Formative **Student evaluation methods** Midterm exam (Multiple Choice Test) 20% End of term exam (Multiple Choice Test and Short Answer Questions) 80% The evaluation criteria are known to the students

5. SUGGESTED BIBLIOGRAPHY

- Cancer Biology. Kitraki and Trougkos (2006)
- The Cell: A molecular approach. Geoffrey M. Cooper & Robert E.
- Recombinant DNA. Watson J.D. (2006)